



BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648- XA347]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to State Route 520 Pontoon Pile Removal Project, Aberdeen, Grays Harbor County, Washington

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.

SUMMARY: NMFS has received a request from Washington State Department of Transportation (WSDOT) for authorization to take marine mammals incidental to State Route 520 Pontoon Construction Site – Marine Piling Removal Project in Aberdeen, Grays Harbor County, Washington. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, one-year renewal that could be issued under certain circumstances and if all requirements are met, as described in **Request for Public Comments** at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Written comments should be submitted via email to *ITP.DeJoseph@noaa.gov*.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period.

Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at *www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act* without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Bonnie DeJoseph, Office of Protected Resources, NMFS, (301) 427-8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act*. In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the “take” of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary

of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed incidental take authorization may be provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other “means of effecting the least practicable adverse impact” on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to in shorthand as “mitigation”); and requirements pertaining to the mitigation, monitoring and reporting of the takings are set forth.

The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our proposed action (*i.e.*, the issuance of an incidental harassment authorization) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (incidental harassment authorizations with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On November 20, 2019, NMFS received a request from WSDOT for an IHA to take marine mammals incidental to the removal of 19-steel piles by vibratory pile driving at the mouth of the Chehalis River where it enters Grays Harbor, WA. WSDOT submitted four revisions. Three between November 2019 and July 2020 and the last on August 17, 2020, subsequent to it being deemed adequate and complete on July 30, 2020. Their request is for take of a small number of Pacific harbor seals (*Phoca vitulina*); California sea lions (*Zalophus californianus*); Steller sea lions (*Eumetopias jubatus*); gray whales (*Eschrichtius robustus*); and harbor porpoises (*Phocoena phocoena*) by Level B harassment only. Neither WSDOT nor NMFS expects serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

WSDOT proposes to remove 19 steel piles and associated barge launch guide appurtenances from the footprint of the casting basin launch channel within the Washington State Department of Natural Resources (DNR) aquatic easement lease area in Grays Harbor (Figures 1 and 2). WSDOT must remove the 19 steel piles on state owned aquatic lands to comply with the terms and conditions of the lease agreement with the Washington DNR. The piles were used to guide completed pontoons out of the casting basin and into Grays Harbor for transport to Lake Washington for the replacement of the SR520 floating-bridge.

A vibratory extractor on a crane will be used to remove the piles over a six-day period with one day for mobilization and another day for demobilization on either end, for a total of eight days of in-water work. The crane will be located on a barge or flexi float, positioned near the piles. Sound in the water from vibratory pile driving may result in behavioral disturbance (or Level B harassment) of five marine mammal species.

Dates and Duration

WSDOT reports in-water work at the project location is limited by the seasonal presence of ESA-listed fishes. Pile removal is estimated to take 14.75 hours over a six-day period with one day for mobilization and another day for demobilization on either end, for a total of eight days (Table 1). The proposed IHA would be effective for one year from date of issuance.

Specific Geographic Region

The proposed project site is in Grays Harbor County, Washington (Figure 1), near where the Chehalis River enters Grays Harbor. Grays Harbor is an estuarine bay located

in the Chehalis River Valley; 45 miles (mi) (72 kilometers (km)) north of the mouth of the Columbia River, on the Southwest Pacific coast of Washington state.

Grays Harbor is a large estuary fed by a 6734 square kilometers (km²) (2,600 square miles (mi²)) drainage basin formed by sedimentation and erosion caused by the Chehalis River, which enters the east end of the harbor, and the Pacific Ocean, which connects with the harbor to the west through a 2.9 km (1.8 mi) wide inlet. Grays Harbor is approximately 24 km (15 mi) long and 21 km (13 mi) across at its widest point, narrowing to fewer than 91.4 m (300 feet (ft)) in some places. River-borne sediments and marine deposits fill the harbor and compose the marsh and sheltered tidal flats of the harbor's interior shorelines.

The average water depth in Grays Harbor is less than 6.1 m (20 ft). However, depths up to 24.4 m (80 ft) have been measured at the mouth of the harbor. Grays Harbor has three main channels: the north channel, middle channel, and south channel. The north channel contains the Grays Harbor Navigation Channel, a 44 km (27.5 mi) channel that extends from the Pacific Ocean to Cosmopolis. The middle and south channels remain shoaled by erosion and sediment deposits. Numerous shallow channels created by ebb tide flows and river discharges are present throughout the harbor (Northwest Area Committee 2013). Net surface flow is seaward and dominated by tidal currents, with a mean tide rise of about 2.7 m (9 ft) (NOAA 2015). Tides of this height typically cover up to 94 square miles in Grays Harbor, while at mean lower low water, low tides typically cover fewer than 38 square miles, exposing large areas of mudflats, sandbars, and low islands dissected by multiple shallow channels (U.S. Army Corps of Engineers 2014 (ACE)). High flows on the Chehalis River can control currents in the upper portion of the

harbor, especially during the winter when storms increase the flow in rivers and streams that feed Grays Harbor.

The form and structure of Grays Harbor are largely determined by differences in the capacity of harbor inflows (flood currents) and ocean waves that transport sediment into the harbor and outflows (ebb currents) that transport sediment out of the harbor. Sediment accumulation in the seaward portion of the harbor is controlled primarily by redistribution of harbor silt by wind and waves and deposition of ocean sands by tidal action; sediment accumulations in the interior harbor are controlled by river inputs (U.S. ACE 2014). Beyond the harbor to the west, the connection to the Pacific Ocean extends between two low-lying peninsulas. The ocean side of the inlet is protected by two rock jetties (north and south) that include above-water and submerged sections.

The inner harbor is heavily industrialized with major port facilities, an airport, pulp mills, landfills, sewage treatment plants, and log storage facilities. Grays Harbor provides commercial shipping access to cities and ports up the Chehalis River. Land use in the Aberdeen area is a mix of residential, commercial, industrial, and open space and/or undeveloped lands (Figure 1).

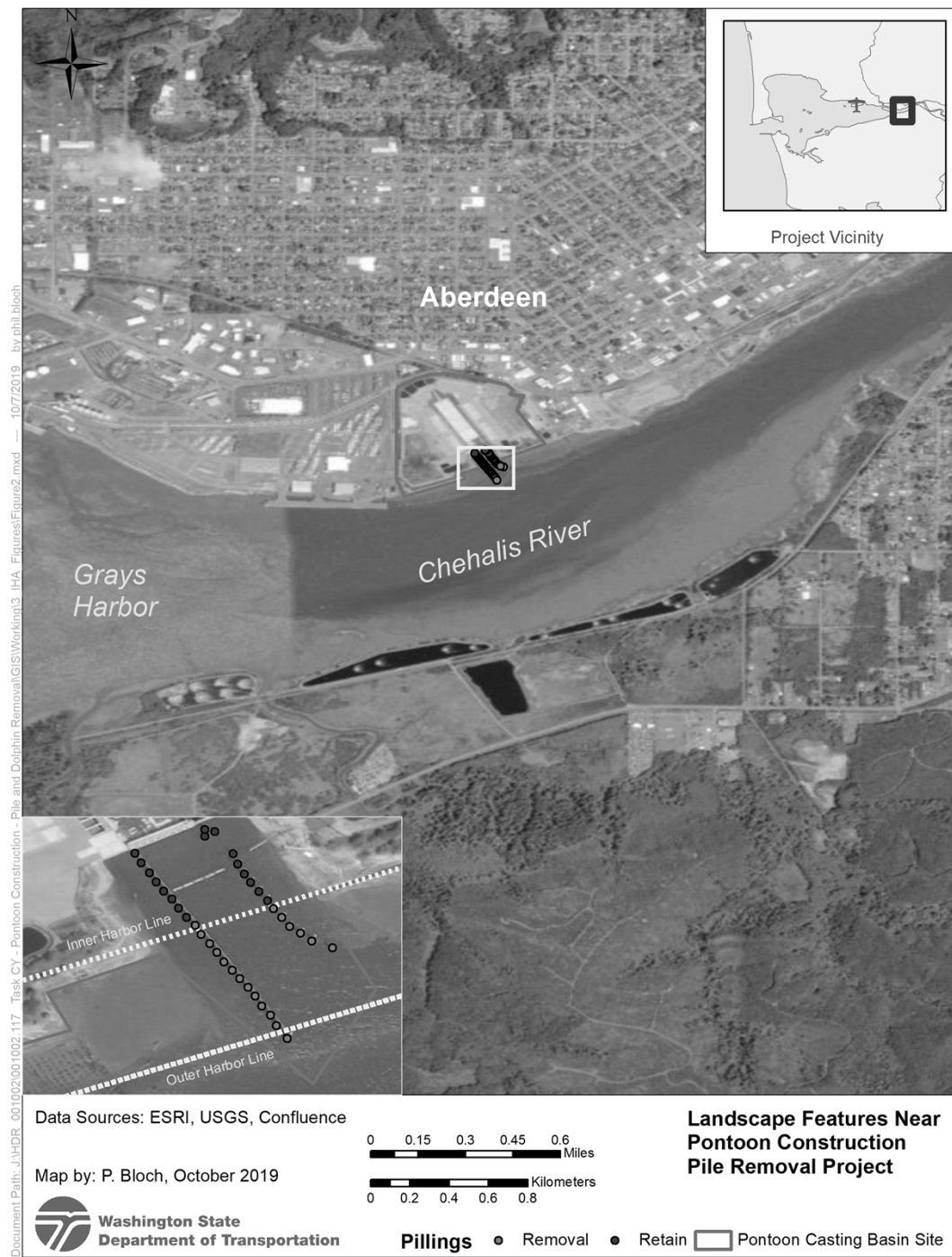


Figure 1. Project Location – Detailed.

Detailed Description of Specific Activity

The proposed project will remove 19 steel piles and associated launch guide appurtenances from the casting basin launch channel within the DNR aquatic easement lease area of Grays Harbor (Table 1). The piles are various sizes (18-, 24 and 48-inch) and are located immediately waterward of the pontoon casting basin at water depths ranging from -3.1 to -9.9 ft mean lower low water (MLLW). A crane will be operated from a barge or flexi float positioned near the piles. The barge will be prohibited from disturbing the river substrate; it will be positioned in approximately 1.2 – 3.4 m (4 – 11 ft) of water during low tides, depending upon pile location. Piles will be removed with a single vibratory hammer rig on the barge and recovered to the same barge. See Table 1 for a detailed summary of pile activities. One day for mobilization and demobilization may be added on either end for a total of nine days of in-water work. Weather, unforeseen issues and shut-downs due to marine mammals entering the work site could also result in the pile removal activities extending beyond 7 days.

Table 1. Summary of Pile Driving Activities.

Method	Pile Type	Estimated Noise Level*	Number of Piles	Minutes per Pile	Total Time (Hours)	Piles per Day	Time per Day (Hours)	Activity Period (Days)**
Vibratory Removal	48-inch steel pile	171 dB _{RMS}	1	45	0.75	1	0.75	1
Vibratory Removal	24-inch steel pile	162 dB _{RMS}	17	45	12.75	4	3	5
Vibratory Removal	18-inch steel pile	162 dB _{RMS}	1	45	0.75	1	0.75	1
TOTAL			19	45	14.25	6	14.25	7

* Origin of project sound source levels discussed in **Estimated Take** section.

** Pile removal activities will be conducted across 11-hour (at maximum) work days, but a “day” of work may not require 11 hours. NMFS increased the estimated removal time of the 18 and 48-inch piles from 0.5 day, as proposed by WSDOT, to 1 day, to reflect a more realistic representation of the potential schedule; *i.e.*, the potential that the two piles maybe removed on separated days.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see *Proposed Mitigation* and *Proposed Monitoring and Reporting*).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS's Stock Assessment Reports (SARs; <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>) and more general information about these species (e.g., physical and behavioral descriptions) may be found on NMFS's website (<https://www.fisheries.noaa.gov/find-species>).

Table 2 lists all species or stocks for which take is expected and proposed to be authorized for this action, and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2020). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Harbor Seal	<i>Phoca vitulina richardii</i>	Oregon/Washington Coastal	-, -, N	24,732 ⁵ (UNK, UNK, 1999)	UND	10.6
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1 – Endangered Species Act (ESA) status: Endangered I, Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

2 – NMFS marine mammal stock assessment reports online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>. CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance. In some cases, CV is not applicable.

3 – These values, found in NMFS’s SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (e.g., commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

4 – NEST is the best estimate of pup and non-pup counts, which have not been corrected to account for animals at sea during abundance surveys.

5 – Abundance estimate for this stock is not considered current. PBR is therefore considered undetermined, as there is no current minimum abundance estimate for use in calculation. We nevertheless present the most recent abundance estimate, as it represents the best available information for use in this document.

As indicated above, all five species (with five managed stocks) in Table 2

temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur, and we have proposed authorizing it. All species that could potentially occur in the proposed survey areas are included in Table 3-1 of the IHA application.

Gray Whale

Gray whales occur along the eastern and western margins of the North Pacific.

From mid-February to May, the Eastern North Pacific stock of gray whales can be seen migrating northward with newborn calves along the west coast of the United States. In the fall, gray whales migrate from their summer feeding grounds, heading south along the coast of North America to spend the winter in their breeding and calving areas off the coast of Baja California, Mexico. During summer and fall, most whales in the Eastern North Pacific stock feed in the Chukchi, Beaufort and northwestern Bering Seas (Carretta *et al.*, 2020), with the exception of a relatively small number of whales (~200 individuals) that summer and feed along the Pacific coast between Kodiak Island, Alaska and northern California, known as the known as the Pacific Coast Feeding Group (PCFG) (Calambokidis *et al.*, 2002).

It is believed that some of the gray whale sightings in Grays Harbor are from the PCFG. Calambokidis and Quan's (1997) 1996 survey reported 27 gray whales in the harbor. A 13-year (1998-2010) collaborative study reported the most sightings in Grays Harbor and its surrounding coastal waters during the months of April and October, 40 and 27, respectively (Calambokidis *et al.*, 2012). A review of existing data (Calambokidis *et al.*, 2015) corroborates Grays' Harbor as one of 28 Biologically Important Areas (BIA) for gray whales in U.S. waters along the West Coast. This is based on 183 sightings primarily occurring from April to November for 17 years. Calambokidis *et al.*, (2019) used photographic identification from small boat surveys over a 22 year time span (1996-2017) to report 99 unique gray whales in the Grays Harbor area from June through November.

Harbor Porpoise

Harbor porpoise occur along the U.S. West Coast from southern California to the Bering Sea (Carretta *et al.*, 2019). They inhabit both coastal and inland waters; primarily in water depths less than approximately 200 m and are most abundant from shore to about the 92 m (50-fathom) isobath (Barlow 1988; Forney *et al.*, 1991; Carretta *et al.*, 2001, 2009). They rarely occur in waters warmer than 62.6 degrees Fahrenheit (17 degrees Celsius; Read 1990) and are most often observed in small groups of one to eight animals (Baird 2003). Furthermore, they are known to be particularly sensitive to anthropogenic impacts such as bycatch in fisheries and disturbance by vessel traffic or underwater noise (Calambokidis *et al.*, 2015).

NMFS conducted aerial line-transect surveys between 2007 and 2012 (Forney *et al.*, 2014). The NMSDD (2019) used the sighting data to geographically stratify line-transect density estimates for harbor porpoise offshore Washington.

Adams *et al.*, (2014) completed the Pacific Continental Shelf Environmental Assessment (PaCSEA) during 2011 and 2012, which included replicated surveys over the continental shelf slope from shore to the 2000 m isobaths along 32 broad-scale transects from Fort Bragg, California (39° N) through Grays Harbor, Washington (47° N). Finer scale surveys were also conducted over the continental shelf within six designated focal areas, including Grays Harbor. Harbor porpoises were found to be present year-round (164 sightings of 270 individuals) and most frequently sighted within the inner-shelf domain throughout the entire study area in all seasons with noteworthy aggregations within the Eureka, Siltcoos, and Grays Harbor Focal Areas. Calambokidis *et al.*, (2015) reported a primary occurrence of 183 sightings of gray whales in Grays Harbor from April to November over 17 years of sightings.

California sea lion

California sea lions occur from Vancouver Island, British Columbia, to the southern tip of Baja California. Sea lions breed on the offshore islands of southern and central California from May through July (Heath & Perrin 2008). During the non-breeding season, adult and sub adult males and juveniles migrate northward along the coast to central and northern California, Oregon, Washington, and Vancouver Island (Jefferson *et al.*, 1993). They return south the following spring (Heath & Perrin 2008; Lowry & Forney 2005). Females and some juveniles tend to remain closer to rookeries (Antonelis *et al.*, 1990; Melin *et al.*, 2008).

Pupping occurs primarily on the California Channel Islands from late May until the end of June (Peterson & Bartholomew 1967). Weaning and mating occur in late spring and summer during the peak upwelling period (Bograd *et al.*, 2009). After the mating season, adult males migrate northward to feeding areas as far away as the Gulf of Alaska (Lowry *et al.*, 1992), and they remain away until spring (March–May), when they migrate back to the breeding colonies. Adult females generally remain south of Monterey Bay, California throughout the year, feeding in coastal waters in the summer and offshore waters in the winter, alternating between foraging and nursing their pups on shore until the next pupping/breeding season (Melin & DeLong 2000; Melin *et al.*, 2008).

Since the mid-1980s, increasing numbers of California sea lions have been documented feeding on fish along the Washington coast and, more recently, in the Columbia River as far upstream as Bonneville Dam, 233 km (145 mi) from the river mouth. All age classes of males are seasonally present in Washington waters (Jeffries *et al.*, 2000). Jeffries *et al.*, (2015) sighted 113 sea lions during four aerial surveys in Grays Harbor from November 2014 to March 2015. The nearest documented California sea lion haul-out sites to the project site are at the Westport Docks, approximately 23 km (14 mi) west of the project site near the entrance to Grays Harbor (Jeffries *et al.*, 2015), and a haulout observed in 1997 referred to as the Mid-Harbor flats located approximately 10 km (6 mi) west of the project site (WDFW 2020).

California sea lions do not avoid areas with heavy or frequent human activity, but rather may approach certain areas to investigate. This species typically does not flush from a buoy or haulout if approached.

Steller sea lion

Steller sea lions occur along the North Pacific Rim from northern Japan to California (Loughlin *et al.*, 1984). Their range comprises the coasts to the outer shelf from northern Japan through the Kuril Islands and Okhotsk Sea, through the Aleutian Islands, central Bering Sea, southern Alaska, and south to California (NOAA 2019d). Two stocks of Steller sea lions are recognized, Western and Eastern stocks, divided at 144° W longitude (Muto *et al.*, 2020). Only individuals from the Eastern stock are expected to occur in the proposed project area.

The eastern stock of Steller sea lions has historically bred on rookeries located in Southeast Alaska, British Columbia, Oregon, and California. However, within the last several years a new rookery has become established on the outer Washington coast (at the Carroll Island and Sea Lion Rock complex), with >100 pups born there in 2015 (Muto *et al.*, 2018). Breeding adults occupy rookeries from late-May to early-July (NMFS 2008). Non-breeding adults use haulouts or occupy sites at the periphery of rookeries during the breeding season (NMFS 2008).

Pupping occurs from mid-May to mid-July (Pitcher & Calkins 1981) and peaks in June (Pitcher *et al.*, 2002). Territorial males fast and remain on land during the breeding season (NMFS 2008). Females with pups generally stay within 30 km of the rookeries in shallow (30–120 m) water when feeding (NMFS 2008). Tagged juvenile Steller sea lions showed localized movements near shore (Briggs *et al.*, 2005) and Loughlin *et al.*, (2003) reported that most (88 percent) at-sea movements of juvenile Steller sea lions were short (< 15 km), foraging trips. Although Steller sea lions are not considered migratory, foraging animals can travel long distances (Loughlin *et al.*, 2003; Raum-Suryan *et al.*,

2002). During the summer, they mostly forage within 60 km from the coast, whereas in winter they can range up to 200 km from shore (Ford 2014).

Twenty-two haulouts (excluding most navigation buoys) occur in Washington. They are mainly distributed along the state's outer coast on offshore rocks, coastal islands, and jetties. Steller sea lions were not surveyed in Jeffries *et al.* (2015) 2014-2015 aerial surveys of Grays Harbor. However, they were observed on the Westport docks during six surveys. The range of annual maximum numbers of Steller sea lions present on other nearby haul-out sites from 1976-2014 include the following: Split Rock/Rock 535, 56 km (35 mi) north of the entrance to Grays Harbor (100-500 individuals); at the mouth of the Columbia River, 74 km (46 mi) south of the entrance to Grays Harbor (100-2,000 individuals); and the Bodeliteh Island area, 154 km (95 mi) north of Grays Harbor, is the most populated (150-2,000 individuals) of the seven haul-out sites in the northern Olympic Coast (Wiles 2015). Additionally, the NOAA Marine Mammal Stranding database (NMMSD, 2020) documented 77 Steller sea lions strandings in Grays Harbor and adjacent coastal area from June 2010 to February 2020. The closest stranding was located in Aberdeen, approximately 1.86 km (1.6 mi) from the project site.

The Navy adjusted the 2017 projected abundances of Steller sea lions to account for time spent hauled out in order to calculate the density of sea lions off the Washington coast. In the fall sea lions are anticipated to be in the water 53 percent of the time, and 64 percent of the time in the spring and winter (NMSDD 2019).

Pacific Harbor Seals

Five stocks of harbor seals (*Phoca vitulina richardii*) are recognized within U.S. West Coast waters: 1) Southern Puget Sound; 2) Washington Northern Inland Waters; 3)

Hood Canal; 4) Oregon/Washington Coast; and 5) California. The Oregon/Washington coast stock occurs in the proposed project area.

Harbor seals are the most abundant breeding pinniped species in the Pacific Northwest (Peterson *et al.*, 2012). Abundance in Washington increased from the 1970s through the 1990s and then stabilized at near carrying-capacity levels (Calambokidis *et al.*, 1985; Jeffries *et al.*, 2003) after a drastic reduction by a bounty program in the Pacific Northwest from 1914 until June 1964 (Zier & Gaydos 2014). In 1999 aerial surveys were flown at midday low tides during pupping season to determine the distribution and abundance of harbor seals in Washington — the last in a 22-year time series of systematic surveys (Jefferies *et al.*, 2003).

Harbor seals mate at sea, and females give birth during the spring and summer, although, the pupping season varies with latitude. Pupping takes place at many locations, and rookery size varies from a few pups to many hundreds of pups. Pups are nursed for an average of 24 days and are ready to swim minutes after being born. Nursery areas in Grays Harbor are located in areas around Whitcomb Flats, Mid-Harbor Flats, Sand Island shoals, Sand Island, Goose Island, Chenoise Creek channels, and in North Bay. Peak harbor seal abundances occur during the pupping season (mid-April through June) and the annual molt (July through August) (Jeffries *et al.*, 2000).

With the exception of long-distance travels recorded by males belonging to the Washington Inland stock, adult harbor seals have been considered to have high site fidelity. Specifically, those in the Pacific Northwest typically remain within <30 km of their primary haul-out site (Peterson *et al.*, 2012).

Hundreds of harbor seal haul-out sites have been identified along Washington's coastal and inland waters, including intertidal sand bars and mudflats in estuaries, intertidal rocks and reefs, sandy, cobble, and rocky beaches, islands, log booms, docks, and floats in all marine areas of the state. Fifteen are located on the intertidal mudflats and sand bars of Grays Harbor (Jeffries *et al.*, 2000). The closest recognized harbor seal haul-out site to the project site is Mid-harbor Flats, a low-tide haulout located approximately 10 km (6 mi) west of the project site.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.*, Richardson *et al.*, 1995; Wartzok & Ketten 1999; Au & Hastings 2008). To reflect this, Southall *et al.*, (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.*, low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound

was deemed to be biologically implausible and the lower bound from Southall *et al.*, (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 3.

Table 3. Marine Mammal Hearing Groups (NMFS 2018).

Hearing Group	Generalized Hearing Range*
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz
High-frequency (HF) cetaceans (true porpoises, <i>Kogia</i> , river dolphins, cephalorhynchid, <i>Lagenorhynchus cruciger</i> & <i>L. australis</i>)	275 Hz to 160 kHz
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz
* Represents the generalized hearing range for the entire group as a composite (<i>i.e.</i> , all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall <i>et al.</i> , 2007) and PW pinniped (approximation).	

The pinniped functional hearing group was modified from Southall *et al.*, (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.*, 2006; Kastelein *et al.*, 2009; Reichmuth & Holt 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information. Five marine mammal species (2 cetacean and 3 pinniped (2 otariid and 1 phocid) species) have the reasonable potential to co-occur with the proposed survey activities. Please refer to Table 2. Of the cetacean species that may be present, one is classified as a low-frequency cetacean (*i.e.*, all

mysticete species) and one is classified as a high-frequency cetacean (*i.e.*, harbor porpoise).

Potential Effects of Specified Activities on Marine Mammals and their Habitat

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The **Estimated Take** section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The **Negligible Impact Analysis and Determination** section considers the content of this section, the **Estimated Take** section, and the **Proposed Mitigation** section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and how those impacts on individuals are likely to impact marine mammal species or stocks.

The WSDOT's proposed activities using in-water pile removal could adversely affect marine mammal species and stocks by exposing them to elevated noise levels in the vicinity of the activity area.

Exposure to high intensity sound for a sufficient duration may result in auditory effects such as a noise-induced threshold shift—an increase in the auditory threshold after exposure to noise (Finneran *et al.* 2005). Factors that influence the amount of threshold shift include the amplitude, duration, frequency content, temporal pattern, and energy distribution of noise exposure. The magnitude of hearing threshold shift normally decreases over time following cessation of the noise exposure. The amount of threshold shift just after exposure is the initial threshold shift. If the threshold shift eventually

returns to zero (*i.e.*, the threshold returns to the pre-exposure value), it is a temporary threshold shift (Southall *et al.* 2007).

Threshold Shift (noise-induced loss of hearing)

When animals exhibit reduced hearing sensitivity (*i.e.*, sounds must be louder for an animal to detect them) following exposure to an intense sound or sound for long duration, it is referred to as a noise-induced threshold shift (TS). An animal can experience temporary threshold shift (TTS) or permanent threshold shift (PTS). TTS can last from minutes or hours to days (*i.e.*, there is complete recovery), can occur in specific frequency ranges (*i.e.*, an animal might only have a temporary loss of hearing sensitivity between the frequencies of 1 and 10 kilohertz (kHz)), and can be of varying amounts (for example, an animal's hearing sensitivity might be reduced initially by only 6 dB or reduced by 30 dB). PTS is permanent, but some recovery is possible. PTS can also occur in a specific frequency range and amount as mentioned above for TTS.

For marine mammals, published data are limited to the captive bottlenose dolphin, beluga, harbor porpoise, and Yangtze finless porpoise (Finneran *et al.*, 2000, 2002, 2003, 2005, 2007, 2010a, 2010b; Finneran & Schlundt, 2010; Lucke *et al.*, 2009; Mooney *et al.*, 2009a, 2009b; Popov *et al.*, 2011a, 2011b; Kastelein *et al.*, 2012a; Schlundt *et al.*, 2000; Nachtigall *et al.*, 2003, 2004). For pinnipeds in water, data are limited to measurements of TTS in harbor seals, an elephant seal, and California sea lions (Kastak *et al.*, 1999, 2005; Kastelein *et al.*, 2012b).

Lucke *et al.* (2009) found a TS of a harbor porpoise after exposing it to airgun noise with a received sound pressure level (SPL) at 200.2 dB (peak-to-peak) re: 1 micropascal (μPa), which corresponds to a sound exposure level of 164.5 dB re: 1 $\mu\text{Pa}^2 \text{ s}$

after integrating exposure. Because the airgun noise is a broadband impulse, one cannot directly determine the equivalent of root-mean-square (rms) SPL from the reported peak-to-peak SPLs. However, applying a conservative conversion factor of 16 dB for broadband signals from seismic surveys (McCauley, *et al.*, 2000) to correct for the difference between peak-to-peak levels reported in Lucke *et al.* (2009) and rms SPLs, the rms SPL for TTS would be approximately 184 dB re: 1 μ Pa, and the received levels associated with PTS (Level A harassment) would be higher. Therefore, based on these studies, NMFS recognizes that TTS of harbor porpoises is lower than other cetacean species empirically tested (Finneran & Schlundt 2010; Finneran *et al.*, 2002; Kastelein & Jennings 2012).

Marine mammal hearing plays a critical role in communication with conspecifics, and interpretation of environmental cues for purposes such as predator avoidance and prey capture. Depending on the degree (elevation of threshold in dB), duration (*i.e.*, recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious (similar to those discussed in auditory masking, below). For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs during a time where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during time when communication is critical for successful mother/calf interactions could have more serious impacts. Also, depending on the degree and frequency range, the effects of PTS on an animal could range in severity, although it is considered generally more serious because it is a permanent condition. Of note, reduced

hearing sensitivity as a simple function of aging has been observed in marine mammals, as well as humans and other taxa (Southall *et al.*, 2007), so one can infer that strategies exist for coping with this condition to some degree, though likely not without cost.

In addition, exposure to noise could cause masking at particular frequencies for marine mammals, which utilize sound for vital biological functions (Clark *et al.*, 2009). Acoustic masking is when other noises such as from human sources interfere with animal detection of acoustic signals such as communication calls, echolocation sounds, and environmental sounds important to marine mammals. Therefore, under certain circumstances, marine mammals whose acoustical sensors or environment are being severely masked could also be impaired from maximizing their performance fitness in survival and reproduction.

Masking occurs at the frequency band that the animals utilize. Therefore, since noise generated from vibratory pile driving is mostly concentrated at low frequency ranges, it may have less effect on high frequency echolocation sounds by *odontocetes* (toothed whales). However, lower frequency man-made noises are more likely to affect detection of communication calls and other potentially important natural sounds such as surf and prey noise. It may also affect communication signals when they occur near the noise band and thus reduce the communication space of animals (*e.g.*, Clark *et al.*, 2009) and cause increased stress levels (*e.g.*, Foote *et al.*, 2004; Holt *et al.*, 2009).

Unlike TS, masking, which can occur over large temporal and spatial scales, can potentially affect the species at population, community, or even ecosystem levels, as well as individual levels. Masking affects both senders and receivers of the signals and could have long-term chronic effects on marine mammal species and populations. Recent

science suggests that low frequency ambient sound levels have increased by as much as 20 dB (more than three times in terms of sound pressure level) in the world's ocean from pre-industrial periods, and most of these increases are from distant shipping (Hildebrand 2009). The noises from WSDOT's vibratory pile removal activities contribute to the elevated ambient noise levels in the project area; thus, increasing potential for or severity of masking.

Finally, marine mammals' exposure to certain sounds could lead to behavioral disturbance (Richardson *et al.*, 1995), such as: changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where noise sources are located; and/or flight responses (*e.g.*, pinnipeds flushing into water from haulouts or rookeries).

The onset of behavioral disturbance from anthropogenic noise depends on both external factors (characteristics of noise sources and their paths) and the receiving animals (hearing, motivation, experience, demography) and is also difficult to predict (Southall *et al.*, 2007). For the WSDOT's construction activities, only continuous noise is considered for effects analysis because WSDOT plans to use vibratory pile removal.

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification could be biologically significant if the change affects growth, survival, and/or reproduction, which depends on the severity, duration, and context of the effects.

In 2016, the Alaska Department of Transportation and Public Facilities (ADOT&PF) documented observations of marine mammals during construction activities (*i.e.*, pile driving) at the Kodiak Ferry Dock (see 80 FR 60636, October 7, 2015). In the marine mammal monitoring report for that project (ABR 2016), 1,281 Steller sea lions were observed within the Level B disturbance zone during pile driving or drilling (*i.e.*, documented as Level B harassment take). Of these, 19 individuals demonstrated an alert behavior, 7 were fleeing, and 19 swam away from the project site. All other animals (98 percent) were engaged in activities such as milling, foraging, or fighting and did not change their behavior. In addition, two sea lions approached within 20 meters (m) of active vibratory pile driving activities. Three harbor seals were observed within the disturbance zone during pile driving activities; none of them displayed disturbance behaviors. Fifteen killer whales and three harbor porpoise were also observed within the Level B harassment zone during pile driving. The killer whales were travelling or milling while all harbor porpoises were travelling. No signs of disturbance were noted for either of these species. Given the similarities in activities, habitat, and some of same species involved, we expect similar behavioral responses of marine mammals to Gray Harbor's specified activity. That is, disturbance, if any, is likely to be temporary and localized (*e.g.*, small area movements).

Marine Mammal Habitat Effects

WSDOT's construction activities could have localized, temporary impacts on marine mammal habitat and their prey by increasing in-water sound pressure levels and slightly decreasing water quality. Increased noise levels may affect acoustic habitat (see masking discussion above) and adversely affect marine mammal prey in the vicinity of

the project area (see discussion below). During vibratory pile driving, elevated levels of underwater noise would ensonify a small section of Grays Harbor where both fishes and mammals occur and could affect foraging success. Additionally, marine mammals may avoid the area during construction, however, displacement due to noise is expected to be temporary and is not expected to result in long-term effects to the individuals or populations. Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater and airborne sound.

A temporary and localized increase in turbidity near the seafloor would occur in the immediate area surrounding the area where piles are installed or removed. In general, turbidity associated with pile installation is localized to about a 7.6 m (25 ft) radius around the pile (Everitt *et al.*, 1980). Cetaceans are not expected to be close enough to the pile driving areas to experience effects of turbidity, and any pinnipeds could avoid localized areas of turbidity. Strong water flow from the Chehalis River into the channels of Grays Harbor is anticipated to disperse any additional suspended sediments produced by project activities at moderate to rapid rates depending on tidal stage. Therefore, we expect the impact from increased turbidity levels to be discountable to marine mammals and do not discuss it further.

In-water Construction Effects on Potential Foraging Habitat

Grays Harbor is an established food habitat for marine mammals, including as a BIA for gray whales. However, the project area is outside of their range at the back of the harbor where the mouth of the Chehalis River conjoins with the harbor, and the ensonified area is a small portion of the harbor. Furthermore, their seasonal migration

pattern takes them to breeding and calving areas off the coast of Baja California for winter; hence, even the PCFG is expected to be further south during the project's timeline. Overall, the total benthic area affected by pile removal is a very small area compared to the vast foraging area available to marine mammals in Grays Harbor, and no areas of particular importance to marine mammals will be impacted by the action. However, pile removal will remove substrate for invertebrate prey that have populated them over the years.

Avoidance by potential prey (*i.e.*, fish) of the immediate area due to the temporary loss of this foraging habitat is also possible. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity.

In-water Construction Effects on Potential Prey – Sound may affect marine mammals through impacts on the abundance, behavior, or distribution of prey species (*e.g.*, crustaceans, cephalopods, fish, zooplankton). Marine mammal prey varies by species, season, and location. Here, we describe studies regarding the effects of noise on known marine mammal prey.

Fish utilize the soundscape and components of sound in their environment to perform important functions such as foraging, predator avoidance, mating, and spawning (*e.g.*, Zelick & Mann, 1999; Fay, 2009). Depending on their hearing anatomy and peripheral sensory structures, which vary among species, fishes hear sounds using pressure and particle motion sensitivity capabilities and detect the motion of surrounding

water (Fay *et al.*, 2008). The potential effects of noise on fishes depends on the overlapping frequency range, distance from the sound source, water depth of exposure, and species-specific hearing sensitivity, anatomy, and physiology. Key impacts to fishes may include behavioral responses, hearing damage, barotrauma (pressure-related injuries), and mortality.

Fish react to sounds which are especially strong and/or intermittent low-frequency sounds, and behavioral responses such as flight or avoidance are the most likely effects. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. The reaction of fish to noise depends on the physiological state of the fish, past exposures, motivation (*e.g.*, feeding, spawning, migration), and other environmental factors. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (*e.g.*, Scholik & Yan, 2001, 2002; Popper and Hastings, 2009). Several studies have demonstrated that impulse sounds might affect the distribution and behavior of some fishes, potentially impacting foraging opportunities or increasing energetic costs (*e.g.*, Fewtrell & McCauley 2012; Pearson *et al.*, 1992; Skalski *et al.*, 1992; Santulli *et al.*, 1999; Paxton *et al.*, 2017). However, some studies have shown no or slight reaction to impulse sounds (*e.g.*, Pena *et al.*, 2013; Wardle *et al.*, 2001; Jorgenson & Gyselman 2009; Cott *et al.*, 2012).

The most likely impact to fish from pile removal activities at the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of

this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

Construction activities, in the form of increased turbidity, have the potential to adversely affect forage fish and juvenile salmonid out migratory routes in the project area. Both herring and salmon form a significant prey base for many marine mammal species that occur in the project area. Increased turbidity is expected to occur in the immediate vicinity (on the order of 3 m (10 ft) or less) of construction activities. Given the limited area affected and high tidal and river flow dilution rates any effects on forage fish and salmon are expected to be minor or negligible.

In summary, given the short daily duration of sound associated with individual pile driving events and the relatively small areas being affected, pile removal activities associated with the proposed action are not likely to have a permanent, adverse effect on any fish habitat, or populations of fish species. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. Thus, we conclude that impacts of the specified activity are not likely to have more than short-term adverse effects on any prey habitat or populations of prey species. Further, any impacts to marine mammal habitat are not expected to result in significant or long-term consequences for individual marine mammals, or to contribute to adverse impacts on their populations.

Estimated Take

This section provides an estimate of the number of incidental takes proposed for authorization through this IHA, which will inform both NMFS' consideration of "small numbers" and the negligible impact determination.

Harassment is the only type of take expected to result from these activities.

Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines “harassment” as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to sound from vibratory pile removal. Based on the nature of the activity, Level A harassment is neither anticipated nor proposed to be authorized.

As described previously, no mortality is anticipated or proposed to be authorized for this activity. Below we describe how the take is estimated.

Generally speaking, we estimate take by considering: (1) acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. We note that while these basic factors can contribute to a basic calculation to provide an initial prediction of takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.*, previous monitoring results or average group size). Below, we describe the factors considered here in more

detail and present the proposed take estimate.

Acoustic Thresholds

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur PTS of some degree (equated to Level A harassment).

Level B Harassment for non-explosive sources – Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source (*e.g.*, frequency, predictability, duty cycle), the environment (*e.g.*, bathymetry), and the receiving animals (hearing, motivation, experience, demography, behavioral context) and can be difficult to predict (Southall *et al.*, 2007, Ellison *et al.*, 2012). Based on what the available science indicates and the practical need to use a threshold based on a factor that is both predictable and measurable for most activities, NMFS uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS predicts that marine mammals are likely to be behaviorally harassed in a manner we consider Level B harassment when exposed to underwater anthropogenic noise above received levels of 120 dB re 1 μ Pa (root mean square (rms)) for continuous (*e.g.*, vibratory pile-driving, drilling) and above 160 dB re 1 μ Pa (rms) for non-explosive impulsive (*e.g.*, seismic airguns) or intermittent (*e.g.*, scientific sonar) sources.

WSDOT's proposed activity includes the use of a continuous source (vibratory pile removal); therefore, the 120 dB re 1 μ Pa (rms) is applicable.

Level A harassment for non-explosive sources – NMFS’ Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). WSDOT’s proposed activity includes the use of non-impulsive (vibratory pile removal) sources.

These thresholds are provided in the table below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS 2018 Technical Guidance, which may be accessed at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>.

Table 4. Thresholds Identifying the Onset of Permanent Threshold Shift.

	PTS Onset Acoustic Thresholds* (Received Level)	
Hearing Group	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	<i>Cell 1</i> $L_{pk,flat}$: 219 dB $L_{E,LF,24h}$: 183 dB	<i>Cell 2</i> $L_{E,LF,24h}$: 199 dB
Mid-Frequency (MF) Cetaceans	<i>Cell 3</i> $L_{pk,flat}$: 230 dB $L_{E,MF,24h}$: 185 dB	<i>Cell 4</i> $L_{E,MF,24h}$: 198 dB
High-Frequency (HF) Cetaceans	<i>Cell 5</i> $L_{pk,flat}$: 202 dB $L_{E,HF,24h}$: 155 dB	<i>Cell 6</i> $L_{E,HF,24h}$: 173 dB
Phocid Pinnipeds (PW) (Underwater)	<i>Cell 7</i> $L_{pk,flat}$: 218 dB $L_{E,PW,24h}$: 185 dB	<i>Cell 8</i> $L_{E,PW,24h}$: 201 dB
Otariid Pinnipeds (OW) (Underwater)	<i>Cell 9</i> $L_{pk,flat}$: 232 dB $L_{E,OW,24h}$: 203 dB	<i>Cell 10</i> $L_{E,OW,24h}$: 219 dB

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 μPa , and cumulative sound exposure level (L_E) has a reference value of 1 $\mu\text{Pa}^2\text{s}$. In this Table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript “flat” is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.*, varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that will feed into identifying the area ensonified above the acoustic thresholds, which include source levels and transmission loss coefficient.

The sound field in the project area is the existing background noise plus additional construction noise from the proposed project. Marine mammals are expected to be affected via sound generated by vibratory pile removal.

Vibratory hammers produce constant sound when operating, and produce vibrations between 1,200 and 2,400 vibrations per minute that liquefy the sediment surrounding the pile, allowing it to be removed with an upward lift from the crane. The actual duration to remove each pile depends on the type and size of the pile, sediment characteristics, etc.

In order to calculate distances to the Level A harassment and Level B harassment sound thresholds for piles of various sizes being used in this project, NMFS used acoustic monitoring data from other locations to develop source levels for the various pile types, sizes and methods. NMFS derived the project sound source levels from reviewing vibratory pile driving source levels in the Naval Base Kitsap at Bangor Trident Support

Facilities EHW-2 Project Acoustic Monitoring Report (2013), CALTRANS Compendium (2015), and Naval Base Kitsap at Bangor Test Pile Program Acoustic Monitoring Report (I&R 2012) (See Table 5). Since adequate data was not available for 18-inch steel piles the vibratory pile driving of 24-inch steel pile, with more than 100 data points, with a source level of 162 dB RMS was used as a proxy. NMFS believes the available data for 48-inch steel piles may be underestimated in comparison to more robust data for 30 and 36-inch steel piles. Hence, the 75th percentile of the sample was used rather than the median noise level (165 dB RMS) to ensure the selected source level is adequately representative of actual source levels.

Table 5. Project Sound Source Levels.

Pile Driving Activity		Source Level
Hammer Type	Pile Type	dB RMS
Vibratory Removal	18-inch steel pile	162
	24-inch steel pile	162
	48-inch steel pile	171
Note: Estimated sound source level at 10 meters without attenuation.		

Level B Harassment Zones

Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater TL is: $TL = B * \text{Log}_{10} (R1/R2)$, where

TL = transmission loss in dB

B = transmission loss coefficient; for practical spreading equals 15

R1 = the distance of the modeled SPL from the driven pile, and

R2 = the distance from the driven pile of the initial measurement

The recommended TL coefficient for most nearshore environments is the practical spreading value of 15. This value results in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions, which is the most appropriate assumption for WSDOT's proposed activity.

Using the practical spreading model, WSDOT determined underwater noise would fall below the behavioral effects threshold of 120 dB rms for marine mammals. NMFS independently estimated the Level B harassment areas using geographic information system (GIS) tools to eliminate land masses and other obstacles that block sound propagation at high tide. Such topographic barriers limit the maximum distance from being attained in all directions as shown by the actual ensonified areas calculated (Figure 2). The estimated Level B harassment distances and associated areas (as limited by topographic barriers), summarized in Table 6, determines the maximum potential Level B harassment zones for the project.

Table 6. Level B Isopleths for Each Pile Type.

Vibratory Pile type	Level B Isopleth (m)	Area (km²)
18-inch steel pile	6,310	9.1
24-inch steel pile	6,310	9.1
48-inch steel pile	25,120	15.35



Figure 2. Estimated Area to be Ensonified to Level B Harassment Threshold for 48-inch Steel Piles.

Level A Harassment Zones

When the NMFS Technical Guidance (2016) was published, in recognition of the fact that ensonified area/volume could be more technically challenging to predict because of the duration component in the new thresholds, we developed a User Spreadsheet that includes tools to help predict a simple isopleth that can be used in conjunction with marine mammal density or occurrence to help predict takes. We note that because of some of the assumptions included in the methods used for these tools, we anticipate that isopleths produced are typically going to be overestimates of some degree, which may result in some degree of overestimate of Level A harassment take. However, these tools offer the best way to predict appropriate isopleths when more sophisticated 3D modeling methods are not available, and NMFS continues to develop ways to quantitatively refine these tools, and will qualitatively address the output where appropriate. For stationary sources such as vibratory pile removal, NMFS User Spreadsheet predicts the distance at which, if a marine mammal remained at that distance the whole duration of the activity, it would incur PTS. Inputs used in the User Spreadsheet, and the resulting isopleths are reported below (Tables 7 and 8).

Table 7. NMFS Technical Guidance User Spreadsheet Input to Calculate Level A Harassment Isopleths.

Method	Vibratory Removal		
Pile Type	48-inch steel pile	24-inch steel pile	18-inch steel pile
Source Level (RMS SPL)	171 dB _{RMS}	162 dB _{RMS}	162 dB _{RMS}
Weighting Factor Adjustment (kHz)	2.5	2.5	2.5
Number of Piles per day	1	4	1

Duration to drive a single pile (min)	45	45	45
Distance of source level measurement (m)	10	10	10

The above input scenarios lead to PTS isopleth distances (Level A thresholds) of 0.3 to 39 meters (128 ft), depending on the marine mammal group and scenario (Table 8).

Table 8. Calculated Distances (m) to Level A Harassment Isopleths During Pile Removal Per Hearing Group.

Pile Type	Level A Harassment Zone (m)				
	Low-Frequency Cetaceans	Mid-Frequency Cetaceans	High-Frequency Cetaceans	Phocid Pinnipeds	Otariid Pinnipeds
48-inch steel pile	26	2	39	16	1
24-inch steel pile	17	1	24	10	1
18-inch steel pile	7	1	10	4	0

Marine Mammal Occurrence

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations.

Gray Whale

Photo identification, monitoring data, and stranding data corroborates the presence of gray whales in Grays Harbor and the adjacent coastal waters, as described in the **Description of Marine Mammals in the Area of Specified Activities** section above. Yet, these sources do not provide density data specific to Grays Harbor. Calambokidis *et al.*, (1997, 2015, 2019) is a collection of more than 20 years of photo identification data, but it does not provide enough information suitable for derivation of a density value. The U.S. 101/Chehalis River Bridge Scour Repair Project Marine Mammal Monitoring

Report (WSDOT 2019) showed no observations of this species. Approximately 29 gray whale strandings were documented in Grays Harbor and adjacent coastal area from February 2010 to August 2019 (NMMSD 2020); the closest to the project was found in mudflats near the tip of Bowerman Airfield, ~9.82 km (6.10 mi) from the project site, in 2018. The NMSDD (2019) estimated the offshore density of gray whales from July to December to be 0.020167 gray whales/km². Using it in estimated take calculations yielded a low value for gray whales (<2) in Grays Harbor that, in NMFS' estimation, did not properly reflect the variability of group sizes and the real likelihood of encounter.

Their group size is known to fluctuate by activity, which in turn correlates to season. During migration, they are solo or in small groups. On the feeding grounds, whales are customarily seen solo or in small, widely dispersed groups. Larger, loosely formed aggregations do occur on feeding and breeding grounds, but are in constant flux (Wursig *et al.*, 2018). Gray whale occurrence off the Washington coast is expected to consist primarily of PCFG whales from July–November, feeding from five BIAs before migrating to the southern breeding grounds for winter (NMSDD 2019).

Harbor Porpoise

Without the species count breakdown of aerial surveys in Grays Harbor (Adam *et al.*, 2014) or information necessary to derive density values from photo identification data (Calambokidis *et al.*, 2015), the NMSDD (2019) annual value for harbor porpoises offshore of Grays Harbor, 0.467/km² is the most appropriate data source to calculate take.

California Sea Lion

The closest of the 116 California sea lion strandings reported in Grays Harbor and adjacent coastal area from August 2010 to February 2020, was located in Aberdeen,

approximately 1.86 km (1.6 mi) from the project site (NMMSD 2020). Without a correction factor to incorporate those sea lions in the water during aerial haulout surveys of Grays Harbor (Jeffries *et al.*, 2015), the density of only individuals hauled out from November to March is 0.12 seal lions/km². Since the appropriate data is not available to calculate the accurate density of all individuals using Grays Harbor, the offshore density of 0.5573 sea lions/km² during September through November (NMSDD 2019) was used.

Steller Sea Lion

Because density data is not available for Grays Harbor, the NMSDD (2019) fall offshore density of 0.139 Steller sea lions/km² is used.

Harbor Seal

Because aerial surveys of harbor seals on land only produce a minimum assessment of the population a correction factor to account for the missing animals is necessary to estimate total abundance. The total counts from 2014 Grays Harbor aerial surveys (Jeffries *et al.*, 2015) were multiplied by the regional correction factor of 1.43 (Huber *et al.*, 2001) to yield the estimated harbor seal abundance. The average survey count (7495 seals/survey) was used to calculate density by dividing by the area of Grays Harbor:

$$\frac{(10483 \text{ total count} * 1.43)/(2 \text{ surveys})}{243 \text{ km}^2} = 30.85 \text{ km}^2$$

The density data specific to Grays Harbor (Jeffries *et al.*, 2015) is preferred over the NMSDD's (2019) estimated density for waters offshore Washington, 0.3424 harbor seals/km².

Take Calculation and Estimation

Here we describe how the information provided above is brought together to produce a quantitative take estimate.

Level A harassment take is not likely because of the small injury zones; the largest Level A harassment distance is 40 m (131 ft) from the source for high-frequency cetaceans (harbor porpoise). NMFS considers that WSDOT can effectively monitor such small zones to implement shutdown measures and avoid Level A harassment takes, and that harbor porpoise in particular are more likely to avoid the construction activity than remain within the zone for the full duration necessary to accumulate sufficient energy to incur injury. Therefore, no Level A harassment take of marine mammals is proposed or authorized.

Take numbers were calculated using the information aggregated in the NMSDD (U.S. Navy, 2019) for the harbor porpoise, California sea lion, and Steller sea lion. Where a low to high range of densities is given for a species, the high-end density value was used in the applicable season (*i.e.*, fall/winter). In these cases, take numbers were calculated as:

Total Take = marine mammal density × ensonified area × pile removal days

Specific adjustments for calculating take numbers for gray whales and harbor seals are provided below.

- Evaluated use of data value (offshore) and result is what we consider underestimate of value. Because recent data for gray whales in Grays Harbor does not provide enough information to derive a density value, and because the Level B harassment zone stretches across the length of Grays Harbor, and the flexible group size

correlated to season, we propose Level B harassment take of 1 gray whale per day of construction activity 1 x 7 days = 7 gray whales.

- The density of harbor seals in Grays Harbor based on Jeffries' *et al.*, (2015) aerial surveys (described above) replaces the NMSDD density value in the Total Take equation above.

Table 9. Input for Level B Harassment Take Calculations Per Species.

Species	Density (#/km ²)	Level B Area 48-in (km ²)	Level B Area 18/24-in (km ²)	#Days 48-in*	#Days 24-in	#Days 18-in**	Level B Take 48-in	Level B Take 24-in	Level B Take 18-in
Gray Whale	0.020*	15.35	9.1	1	5	1	0.31	0.7	0.2
Harbor Porpoise	0.467	15.35	9.1	1	5	1	7	17	4
CA Sea Lion	0.557	15.35	9.1	1	5	1	9	20	5
Steller Sea Lion	0.139	15.35	9.1	1	5	1	2	5	1
Harbor Seal	30.85	15.35	9.1	1	5	1	473	1123	281

* Density was not used in the calculation of estimated take for gray whales.

Table 10. Proposed Authorized Level B Harassment Take, by Species and Stock and Percent of Take by Stock.

Species	Proposed Take Level B	% Population	Percent of Stock
Gray Whale	7	0.03	<0.1
Harbor Porpoise	28	0.13	0.1
CA Sea Lion	34	0.013	<0.1
Steller Sea Lion	8	0.02	<0.1
Harbor Seal	1877	7.59	7.6

Proposed Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not

applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

The following mitigation measures are proposed in the IHA:

Temporal and Seasonal Restrictions

Timing restrictions would be used to avoid in-water work when ESA-listed salmonids are most likely to be present. Furthermore, work is planned to occur only

during daylight hours, when visual monitoring of marine mammals can be effectively conducted (30 minutes after sunrise to 30 minutes before sunset).

Establishment of Shutdown Zone

WSDOT will establish a shutdown zone for all pile driving and removal activities. The purpose of a shutdown zone is generally to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Shutdown zones will vary based on the activity type and marine mammal hearing group (**Error! Reference source not found.**4). The largest shutdown zones are generally for high frequency cetaceans, as shown in Table 11.

Table 11. Shutdown Zones During Pile Driving Activities.

Pile Type	Low-Frequency Cetaceans	High-Frequency Cetaceans	Phocid Pinnipeds	Otariid Pinnipeds
48-inch steel pile	30	40	20	10
24-inch steel pile	20	30	15	10
18-inch steel pile	10	10	10	10

For in-water heavy machinery activities other than pile driving, if a marine mammal comes within 10 m, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions. WSDOT must also implement shutdown measures if the cumulative total number of individuals observed within the Level B harassment monitoring zones for any particular species reaches the number authorized under the IHA and if such marine mammals are sighted within the vicinity of the project area and are approaching the Level B Harassment zone during in-water construction activities.

Monitoring for Level B Harassment

WSDOT will monitor the Level B harassment and the Level A harassment zones. Monitoring zones provide utility for observing by establishing monitoring protocols for areas adjacent to the shutdown zones. Monitoring zones enable observers to be aware of and communicate the presence of marine mammals in the project area outside the shutdown zone and thus prepare for a potential halt of activity should the animal enter the shutdown zone. Placement of Protected Species Observers (PSO) will allow PSOs to observe marine mammals within the Level B harassment zones.

Pre-activity Monitoring

Prior to the start of daily in-water construction activity, or whenever a break in pile removal of 30 minutes or longer occurs, PSOs will observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone will be considered cleared when a marine mammal has not been observed within the zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, operations cannot proceed until the animal has left the zone or has not been observed for 15 minutes. When a marine mammal for which Level B harassment take is authorized is present in the Level B harassment zone, activities may begin and Level B harassment take will be recorded. If work ceases for more than 30 minutes, the pre-activity monitoring of the shutdown zones will commence.

Non-Authorized Take Prohibited

If a species enters or approaches the Level B harassment zone and that species is not authorized for take, pile driving and removal activities must shut down immediately. Activities must not resume until the animal has been confirmed to have left the area or an observation time period of 15 minutes has elapsed.

Based on our evaluation of the applicant's mitigation measures, NMFS has preliminarily determined that the required mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of

marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas);

- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and
- Mitigation and monitoring effectiveness.

Visual Monitoring

Marine mammal monitoring must be conducted in accordance with the Monitoring section of the application and Section 5 of the IHA. Marine mammal monitoring during pile removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:

- Independent PSOs (*i.e.*, not construction personnel) who have no other assigned tasks during monitoring periods must be used;
- At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization;
- Other PSOs may substitute education (degree in biological science or related field) or training for experience; and

- WSDOT must submit PSO Curriculum Vitae for approval by NMFS prior to the onset of pile driving.

PSOs must have the following additional qualifications:

- Ability to conduct field observations and collect data according to assigned protocols;
- Experience or training in the field identification of marine mammals, including the identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates, times, and reason for implementation of mitigation (or why mitigation was not implemented when required); and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

Two PSOs will be employed. PSO locations will provide an unobstructed view of all water within the shutdown zone, and as much of the Level B harassment zones as possible. PSO locations are as follows:

- (1) At the pile driving site or best vantage point practicable to monitor the shutdown zones; and

(2) On shore, south of Mid-harbor Flats or best vantage point to monitor the harbor seal haul-out site during construction activities.

Monitoring will be conducted 30 minutes before, during, and 30 minutes after pile driving/removal activities. In addition, observers shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions in concert with distance from piles being driven or removed. Pile driving activities include the time to install or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving or drilling equipment is no more than 30 minutes.

Reporting

A draft marine mammal monitoring report will be submitted to NMFS within 90 days after the completion of pile driving and removal activities, or 60 days prior to a requested date of issuance of any future IHAs for projects at the same location, whichever comes first. The report will include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets.

Specifically, the report must include:

- Dates and times (begin and end) of all marine mammal monitoring;
- Construction activities occurring during each daily observation period, including how many and what type of piles were removed;
- Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), including Beaufort sea state and any other relevant weather conditions including cloud cover, fog, sun glare, and

overall visibility to the horizon, and estimated observable distance (if less than the harassment zone distance);

- The number of marine mammals observed, by species, relative to the pile location and if pile driving or removal was occurring at time of sighting;
- Age and sex class, if possible, of all marine mammals observed;
- PSO locations during marine mammal monitoring;
- Distances and bearings of each marine mammal observed to the pile being driven or removed for each sighting (if pile driving or removal was occurring at time of sighting);
- Description of any marine mammal behavior patterns during observation, including direction of travel and estimated time spent within the Level A and Level B harassment zones while the source was active;
- Number of marine mammals detected within the harassment zones, by species;
- Detailed information about any implementation of any mitigation triggered (*e.g.*, shutdowns and delays), a description of specific actions that ensued, and resulting behavior of the animal, if any;
- Description of attempts to distinguish between the number of individual animals taken and the number of incidences of take, such as ability to track groups or individuals; and
- Submit all PSO datasheets and/or raw sighting data (in a separate file from the Final Report referenced immediately above).

If no comments are received from NMFS within 30 days, the draft final report

will constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.

Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, WSDOT shall report the incident to the Office of Protected Resources (OPR), NMFS and to the regional stranding coordinator as soon as feasible. If the death or injury was clearly caused by the specified activity, WSDOT must immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHA. The IHA-holder must not resume their activities until notified by NMFS. The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal was discovered.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects

on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be “taken” through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.*, intensity, duration), the context of any responses (*e.g.*, critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS’s implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid redundancy this introductory discussion of our analyses applies to all of the species listed in **Error! Reference source not found.**⁰, given that many of the anticipated effects of this project on different marine mammal stocks are expected to be relatively similar in nature. Pile removal activities have the potential to disturb or displace marine mammals. Specifically, the project activities may result in take, in the form of Level B harassment from underwater sounds generated from pile removal. Potential takes could occur if individuals are present in the Level B harassment zone when these activities are underway.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity are not expected to

adversely affect the species or stock through effects on annual rates of recruitment or survival:

- No mortality is anticipated or authorized;
- No takes by Level A harassment are anticipated or authorized. Takes by Level B harassment constitute less than 8 percent of the best available abundance estimates for all stocks;

- Take would occur over a short timeframe (6 days of active pile removal during the IHA effective period) and not occur in places and/or times where take would be more likely to accrue to impacts on reproduction or survival, such as within ESA-designated or proposed critical habitat;

- Stock is not known to be declining or suffering from known contributors to decline (*e.g.*, unusual mortality event (UME), oil spill effects); and

- Monitoring reports from similar work from the Chehalis River Bridge Scour Repair Project have documented little to no effect on individuals of the same species impacted by the specified activities.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military

readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

The amount of take NMFS proposes to authorize of all species or stocks is below one third of the estimated stock abundance (in fact, take of individuals is less than 8 percent of the abundance for all affected stocks). These are all likely conservative estimates because they assume all takes are of different individual animals which is likely not the case. Some individuals may return multiple times in a day, but PSOs would count them as separate takes if they cannot be individually identified.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened species.

No incidental take of ESA-listed species is proposed for authorization or expected to result from this activity. Therefore, NMFS has determined that formal consultation under section 7 of the ESA is not required for this action.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to WSDOT for conducting State Route 520 Pontoon Pile Removal Project, Aberdeen, Grays Harbor County, Washington over approximately six days, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>.

Request for Public Comments

We request comment on our analyses, the proposed authorization, and any other aspect of this notice of proposed IHA for the proposed removal of pilings. We also request at this time comment on the potential Renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or

literature citations to help inform decisions on the request for this IHA or a subsequent Renewal IHA.

On a case-by-case basis, NMFS may issue a one-time, one-year Renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical or nearly identical, or nearly identical, activities as described in the **Description of Proposed Activity** section of this notice is planned or (2) the activities as described in the **Description of Proposed Activity** section of this notice would not be completed by the time the IHA expires and a Renewal would allow for completion of the activities beyond that described in the *Dates and Duration* section of this notice, provided all of the following conditions are met:

- A request for renewal is received no later than 60 days prior to the needed Renewal IHA effective date (recognizing that the Renewal IHA expiration date cannot extend beyond one year from expiration of the initial IHA).
- The request for renewal must include the following:
 - (1) An explanation that the activities to be conducted under the requested Renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (*e.g.*, reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take); and
 - (2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

Upon review of the request for Renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: October 21, 2020.

Donna S. Wieting,

Director, Office of Protected Resources,

National Marine Fisheries Service.

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